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Kansas
Susan Mosier, MD, Secretary | Department of Health & Environment | Sam Brownback, Governor

AIR EMISSION SOURCE CONSTRUCTION PERMIT

Source ID No.: 0150004

Effective Date: November 13, 2013 (Revised DRAFT, 2016)

Source Name: Frontier El Dorado Refining LLC

SIC Code: 2911; Petroleum Refining

NAICS Code: 324110; Petroleum Refineries

Source Location: 1401 South Douglas Road
El Dorado, Butler County, Kansas 67042

Mailing Address: P.O. Box 1121
El Dorado, Kansas 67042

Contact Person: Andrew Beard
Environmental Specialist
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This permit is issued pursuant to K.S.A. 65-3008 as amended.

I. Description of Activity Subject to Air Pollution Control Regulations

Frontier El Dorado Refining LLC (FEDR) proposed, and was approved through an Air Emission Source Construction Permit effective November 13, 2013 (as referenced by C-10961), ~~is proposing~~ to modify its refinery operations in order to meet the U.S. EPA Mobile Source Air Toxics Phase 2 (MSAT II) rule which limits the benzene content of gasoline produced in the U.S. to an annual refinery average of 0.62 percent by volume. FEDR's proposal to meet the requirements of the federal MSAT II rule is ~~will be~~ facilitated through the Naphtha Fractionation Project (NFP) which includes installation of new equipment and modification/change in the method of operation of existing equipment and/or processes.

The new equipment associated with the NFP includes: a 20 MMscfd Hydrogen Generation Unit (HGU-3) for providing additional high purity hydrogen and steam, including a Pressure Swing Adsorption (PSA) purification unit, a 210 MMBTU/hr reformer furnace combusting ~~which will combust~~ refinery fuel gas, natural gas, and PSA off-gas, and atmospheric and analyzer vents; a Crude Unit Stabilizer Column to replace the existing column; a Naphtha Fractionation Column (NFC) to replace the Hydrotreating Unit #3 Naphtha Splitter Column, the Reformate Splitter Columns, and the Deisohexanizer; and process fugitive equipment associated with the project. The reformer furnace will utilize Selective Catalytic Reduction (SCR) technology which ~~will~~ includes an SCR system, an aqueous ammonia storage tank, and process fugitive equipment. Existing equipment and/or processes affected by the NFP include: a cooling tower, gasoline storage, and isomerate storage.

The purpose of the NFC is to separate the feed streams, heavy naphtha and light naphtha from Hydrotreating Units #2 and #3, respectively, into an isopentane rich stream, an isomerate feed (light naphtha with crude inherent benzene), an intermediate blend naphtha stream (benzene precursors), and a heavy naphtha feed (benzene and benzene precursor free naphtha). The light naphtha containing crude inherent benzene will be routed to the isomerization unit and converted to isomerate. The intermediate naphtha containing benzene precursors will be used directly for gasoline blending and not routed to the Catalytic Reforming Units (CRUs). As a result, the heavy naphtha feed to the CRUs will be virtually benzene and benzene precursor free producing reformate which is nearly benzene free and can be used directly for gasoline blending.

Potential emissions of oxides of nitrogen (NO_x), sulfur dioxide (SO_2), carbon monoxide (CO), particulate matter (PM), PM with an aerodynamic diameter less than or equal to 10 micrometers (PM_{10}), PM with an aerodynamic diameter less than or equal to 2.5 micrometers ($PM_{2.5}$), volatile organic compounds (VOC), hazardous air pollutants (HAPs), hydrogen sulfide (H_2S), and greenhouse gas[1] (GHG) were evaluated as part of the review process. The proposed project constituteds ~~d~~ a major modification under *40 CFR 52.21, Prevention of Significant Deterioration (PSD) of Air Quality,* as adopted by **K.A.R. 28-19-350** because it resulteds ~~d~~ in a significant emissions increase of GHG greater than 75,000 tons per year carbon dioxide equivalent (CO_2e). Other pollutants evaluated as part of the review process did not result in emissions greater than the respective significant emission rates. Therefore, the proposed project was ~~is~~ subject to Best Available Control Technology (BACT) for GHG emissions only. BACT was ~~ill be~~ applied to the new reformer furnace and deaerator atmospheric vent associated with the Hydrogen Generation Unit (HGU-3) and to process fugitive equipment. In addition, FEDR requested federally enforceable operational restrictions to utilize SCR technology for control of NO_x emissions.

On June 23, 2014, the United States Supreme Court issued a decision in *Utility Air Regulatory Group v. Environmental Protection Agency* (EPA) (No. 12-1146) addressing the application of stationary source permitting requirements to GHG. In short, the Supreme Court held that the EPA may not treat GHG as an air pollutant for purposes of determining whether a source is a major source required to obtain a PSD or Title V permit; and thus, invalidated regulations implementing that approach. The November 13, 2013 Air Emission Source Construction Permit was issued to FEDR in accordance with these regulations because the modification was classified as "major" solely on the basis of GHG emissions. In light of the Supreme Court decision, the November 13, 2013 permit requirements associated with GHG emissions, specifically GHG BACT (Section **VI.**I.), are no longer appropriate and are being eliminated by this permit revision.

[1] Greenhouse gas is a single air pollutant defined as the aggregate group of the following six gases: carbon dioxide (CO_2), nitrous oxide (N_2O), methane (CH_4), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

II. Significant Applicable Air Pollution Control Regulations

The project, as proposed, is~~will be~~ subject to Kansas Administrative Regulations relating to air pollution control. The application for this permit was reviewed and is~~will be~~ evaluated for compliance with the following applicable regulations:

A. K.A.R. 28-19-11, Exceptions Due to Breakdowns or Scheduled Maintenance (applicable to state regulations K.A.R. 28-19-30 through 32 and K.A.R. 28-19-650)

B. K.A.R. 28-19-23(A), Hydrocarbon Emissions – Stationary Sources [Currently, this regulation is applicable to existing storage tanks (T17, T20, and T447) affected by the project.]

C. K.A.R. 28-19-30 through K.A.R. 28-19-32, Indirect Heating Equipment Emissions [This regulation is applicable to the HGU-3 reformer furnace.]

D. K.A.R. 28-19-300, Construction Permits and Approvals; Applicability

E. K.A.R. 28-19-302(a) and (b), Construction Permits and Approvals; Additional Provisions; Construction Permits

~~F. K.A.R. 28-19-350, Prevention of Significant Deterioration of Air Quality~~

~~G.~~F. K.A.R. 28-19-650, Emissions Opacity Limits

~~H.~~G. *40 CFR Part 60:*

1. *Subpart A, General Provisions*

2. *Subpart K, Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978* [Currently, this regulation is applicable to existing storage tanks (T17 and T20) affected by the project.]

3. *Subpart Ka, Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984* [Currently, this regulation is applicable to an existing storage tank (T447) affected by the project.]

4. *Subpart Ja, Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007* [The HGU-3 reformer furnace is an affected facility under this regulation.]

5. *Subpart GGGa, Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006* [Process fugitive equipment associated with the project is an affected facility under this regulation.]

~~I.~~H. *40 CFR Part 61:*

1. *Subpart A, General Provisions*

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2. *Subpart V, National Emission Standard for Equipment Leaks (Fugitive Emission Sources)* [Process fugitive equipment associated with the project is an affected facility under this regulation.]

3. *Subpart FF, National Emission Standard for Benzene Waste Operations* [This regulation is applicable to the refinery and affected waste streams associated with the project.]

~~J.~~I. *40 CFR Part 63:*

1. *Subpart A, General Provisions*

2. *Subpart CC, National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries* [The refinery is an existing source under this regulation. Affected sources associated with the project will be subject to existing source requirements.]

3. *Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters* [The HGU-3 reformer furnace is an affected source under this regulation.]

III. Air Emission Unit Technical Specifications

The following equipment or equivalent is approved:

A. New Process Equipment

1. A 20 MMscfd Hydrogen Generation Unit (HGU-3) including a PSA purification unit, a 210 MMBTU/hr reformer furnace combusting refinery fuel gas, natural gas, and PSA off-gas, and atmospheric and analyzer vents will be installed. The HGU-3 reformer furnace will utilize Selective Catalytic Reduction (SCR) technology (for NO_x emissions control) which will include an SCR system, an aqueous ammonia storage tank, and process fugitive equipment. ~~**The HGU-3 reformer furnace is subject to BACT for GHG (CO_2, CH_4, and N_2O) [CO_2e]. The deaerator atmospheric vent is subject to BACT for GHG (CO_2).**~~

2. A Crude Unit Stabilizer Column will replace the existing column.

3. A Naphtha Fractionation Column (NFC) will replace the Hydrotreating Unit #3 Naphtha Splitter Column, the Reformate Splitter Columns, and the Deisohexanizer.

4. Process fugitive equipment associated with the project will be installed. ~~**This source is subject to BACT for GHG (CH_4) [CO_2e].**~~

B. Modified and Affected Process Equipment

1. An existing cooling tower will undergo installation of an additional cell or revamp of an existing cell. The cooling tower circulation rate will increase by approximately 300 gallons per minute.

2. Existing storage tanks will have an increase in gasoline throughput by approximately 57.5 MMgal. The storage tanks affected by the project are: T17, T18, T19, T20, T32, T64, T65, T226, and T447.

3. Existing storage tanks will accommodate isomerate which is currently stored in a sphere (pressure vessel). The storage tanks affected by the project are: TK 227 and TK 253.

IV. Air Emissions Estimates from the Proposed Activity

Table 1 – Air Emissions Estimates

Pollutant	Potential-To-Emit[2] (Tons Per Year)
NO_x[3]	9.20
SO_2	8.98
CO	36.98
PM	6.97
PM_{10}	6.97
$PM_{2.5}$	6.97
VOC	21.66
Combined HAPs	9.97
H_2S	0.05
GHG (CO_2e)[4]	190,119

V. Air Emission Limitations (General)

A. K.A.R. 28-19-31(a): Aggregated emissions of particulate matter from indirect heating equipment shall not exceed those specified in Table H-1 or for equipment having intermediate heat input between 10 MMBTU/hr and 10,000 MMBTU/hr, the allowable emission rate may be determined by the equation provided in K.A.R. 28-19-31(a).

B. K.A.R. 28-19-31(b)(2): Opacity of visible emissions from the HGU-3 reformer furnace is limited to less than 20 percent.

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[2] Potential-to-emit (PTE) means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on a capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable.

[3] The PTE estimate is based on operation of the SCR to control NO_x emissions from the HGU-3 reformer furnace.

[4] The PTE estimate is the sum of emissions from the Hydrogen Generation Unit (HGU-3) Reformer Furnace (189,800 tons CO_2e), HGU-3 Deaerator Atmospheric Vent (253 tons CO_2), and Process Fugitive Equipment (66 tons CO_2e).

C. K.A.R. 28-19-650(a)(3): Opacity of visible emissions from equipment other than the HGU-3 reformer furnace, is limited to 20 percent or less.

VI. Permit Conditions

This section contains specific conditions for the proposed project which include air emission limitations and standards, monitoring, recordkeeping, compliance, and performance testing requirements. If the conditions contained herein are not in exact agreement with the permit application, or any of its revisions, the conditions contained herein shall control.

Subsections A. through G. identify regulatory requirements for affected sources and facilities. Subsection H. identifies air pollution control requirements for a specific emission unit. ~~Subsection I. identifies GHG BACT requirements for affected emission units/sources.~~

A. For the **HGU-3 reformer furnace**, the owner or operator shall comply with the applicable requirements of *40 CFR Part 60 Subpart Ja, Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007*. A summary of the requirements is as follows:

1. Emission Limitations and Standards

   a. In accordance with 40 CFR 60.102a(a), the owner or operator shall comply with the applicable emission limitations in 40 CFR 60.102a(g) on and after the date on which the initial performance test, required by 40 CFR 60.8, is completed, but not later than 60 days after achieving the maximum production rate at which the affected facility will be operated or 180 days after initial startup, whichever comes first.

   b. In accordance with 40 CFR 60.102a(g)(1)(ii), the owner or operator shall not burn any fuel gas that contains H_2S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis and H_2S in excess of 60 ppmv determined daily on a 365 successive calendar day rolling average basis.

   c. In accordance with 40 CFR 60.102a(g)(2)(i), the owner or operator shall not discharge to the atmosphere any emissions of NO_x in excess of 40 ppmv (dry basis, corrected to 0-percent excess air) or 0.040 lb/MMBtu higher heating value basis determined daily on a 30-day rolling average basis.

   d. In accordance with 40 CFR 60.103a(c), the owner or operator shall conduct a root cause analysis and a corrective action analysis for the condition specified in 40 CFR 60.103a(c)(2). The analyses must be completed in accordance with 40 CFR 60.103a(d). Corrective action(s) shall be implemented in accordance with 40 CFR 60.103a(e).

2. Performance Test, Monitoring, Notification, Recordkeeping, and Reporting Requirements

a. In accordance with the test methods and procedures in 40 CFR 60.104a, the owner or operator shall conduct a performance test, as applicable, to demonstrate initial compliance with the applicable emission limits in 40 CFR 60.102a(g) according to the requirements of 40 CFR 60.8.

b. The owner or operator shall monitor emissions and operations in accordance with 40 CFR 60.107a, as applicable.

c. The owner or operator shall provide notification, maintain records, and submit excess emissions reports in accordance with 40 CFR 60.108a, as applicable.

B. For the **HGU-3 reformer furnace**, the owner or operator shall comply with the applicable requirements of *40 CFR Part 63 Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*. A summary of the requirements is as follows:

1. Limitations and Standards

In accordance with 40 CFR 63.7500(a), the owner or operator must meet the applicable requirements in paragraphs (a)(1) through (3), except as provided in 40 CFR 63.7500(b) through (e). The owner or operator must meet the requirements at all times the affected unit is operating, except as provided in 40 CFR 63.7500(f).

2. Compliance Requirements

a. The HGU-3 reformer furnace is a new affected source under 40 CFR 63.7490(a)(2) and (b). In accordance with 40 CFR 63.7495(a), the owner or operator must comply with this subpart upon startup of the HGU-3 reformer furnace.

b. In accordance with 40 CFR 63.7510(g), the owner or operator must demonstrate initial compliance with the applicable work practice standards in Table 3 to this subpart within the applicable schedule as specified in 40 CFR 63.7540(a) following the initial compliance date.

c. The owner or operator required to meet an applicable tune-up work practice standard must conduct subsequent tune-ups according to 40 CFR 63.7515(d).

d. The owner or operator must demonstrate initial compliance according to 40 CFR 63.7530 and continuous compliance according to 40 CFR 63.7540, as applicable.

e. In accordance with 40 CFR 63.7565, the owner or operator shall comply with the applicable requirements of *40 CFR Part 63 Subpart A, General Provisions*, as identified in Table 10 to this subpart.

3. Notification, Reporting, and Recordkeeping Requirements

a. The owner or operator must submit the applicable notifications as specified in 40 CFR 63.7545.

b. The owner or operator must submit the applicable reports as specified in 40 CFR 63.7550.

c. The owner or operator must keep the records specified in 40 CFR 63.7555, as applicable, and in accordance with 40 CFR 63.7560.

C. For **process fugitive equipment**, the owner or operator shall comply with the applicable requirements of *40 CFR Part 60 Subpart GGGa, Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006*. A summary of the requirements is as follows:

1. Standards

The owner or operator shall comply with the following requirements as soon as practicable, but not later than 180 days after initial startup:

a. The owner or operator shall comply with the requirements of 40 CFR 60.482-1a through 60.482-10a. [40 CFR 60.592a(a)]

b. The owner or operator may elect to comply with the applicable requirements of 40 CFR 60.592a(b) as an alternative to the requirements in 40 CFR 60.482-7a.

2. Testing, Recordkeeping, and Reporting Requirements

a. The owner or operator shall comply with the test methods and procedures provisions of 40 CFR 60.485a except as provided in 40 CFR 60.593a. [40 CFR 60.592a(d)]

b. The owner or operator shall comply with the recordkeeping and reporting provisions of 40 CFR 60.486a and 60.487a. [40 CFR 60.592a(e)]

c. The owner or operator may comply with the exceptions to the provisions of *40 CFR Part 60 Subpart VVa* as specified in 40 CFR 60.593a.

D. For **process fugitive equipment**, the owner or operator shall comply with the applicable requirements of *40 CFR Part 61, Subpart V, National Emission Standard for Equipment Leaks (Fugitive Emission Sources)*, except as provided in Subsection F. A summary of the requirements is as follows:

1. Standards

The owner or operator shall demonstrate compliance with the applicable requirements of 40 CFR 61.242-1 to 61.242-11, except as provided in 40 CFR 61.243-1, 61.243-2, and 61.244.

2. Testing, Recordkeeping, and Reporting Requirements

a. The owner or operator shall comply with the applicable test methods and procedures requirements as specified in 40 CFR 61.245.

b. The owner or operator shall comply with the applicable recordkeeping requirements as specified in 40 CFR 61.246.

c. The owner or operator shall comply with the applicable reporting requirements as specified in 40 CFR 61.247.

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E. For the **storage tanks** affected by the project, T17, T20, and T447, the owner or operator shall continue to comply with the following requirements, as applicable, except as provided in Subsection F.:

1. K.A.R. 28-19-23(A), Hydrocarbon Emissions – Stationary Sources

2. *40 CFR Part 60 Subpart K, Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978* [storage tanks: T17 and T20]

3. *40 CFR Part 60 Subpart Ka, Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984* [storage tank: T447]

4. *40 CFR Part 63 Subpart CC, National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries*

F. The proposed project is part of an existing affected source subject to *40 CFR Part 63 Subpart CC, National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries*. Upon initial startup of the affected sources, the owner or operator shall comply with the applicable requirements related to standards, monitoring, test methods and procedures, recordkeeping, and reporting. The following items address overlap of *40 CFR Part 63, Subpart CC* with other regulations:

1. In accordance with 40 CFR 63.640(n), storage vessels subject to *40 CFR Part 63 Subpart CC* that are also subject to the provisions of *40 CFR Part 60 Subpart K or Ka* are required to comply only with the provisions specified in 40 CFR 63.640(n)(5), (n)(6), or (n)(7), as applicable.

2. In accordance with 40 CFR 63.640(p)(1), equipment leaks subject to *40 CFR Part 63 Subpart CC* that are also subject to the provisions of *40 CFR Part 61* standards promulgated before September 4, 2007 are required to comply only with the provisions specified in *40 CFR Part 63 Subpart CC*. However, the owner or operator shall comply with the applicable provisions of *40 CFR Part 61 Subpart V* for fugitive sources not affected/covered by *40 CFR Part 63 Subpart CC*.

3. In accordance with 40 CFR 63.640(p)(2), equipment leaks subject to *40 CFR Part 63 Subpart CC* that are also subject to the provisions of *40 CFR Part 60 Subpart GGGa* are required to comply only with the provisions specified in *40 CFR Part 60 Subpart GGGa*.

G. The refinery and affected waste streams associated with the project are subject to *40 CFR Part 61, Subpart FF, National Emission Standard for Benzene Waste Operations*. The owner or operator shall comply with the applicable requirements related to standards, monitoring, test methods and procedures, compliance provisions, recordkeeping, and reporting.

H. For the **HGU-3 reformer furnace**, the owner or operator shall comply with the following requirements:

1. Standards

The air pollution control equipment (SCR system) shall be continuously operated while the HGU-3 reformer furnace is in operation. [K.A.R. 28-19-302(b) and 28-19-501(d)(1)]

2. Monitoring and Recordkeeping Requirements

a. Within 180 days of permit issuance, a written maintenance plan to assure proper operation of the air pollution control equipment shall be developed, implemented, and maintained. [K.A.R. 28-19-302(b) and 28-19-501(d)(2)]

b. A log shall be maintained showing the date of all routine or other maintenance, malfunction or repair of the air pollution control equipment, the nature of the action taken on such date, and any corrective action or preventative measures taken. [K.A.R. 28-19-302(b) and K.A.R. 28-19-501(d)(3)]

c. Records shall be maintained on-site for a period of five (5) years from the date of the record. [K.A.R. 28-19-302(a)]

~~I. The owner or operator shall comply with the following GHG BACT requirements:~~

~~1. Emission Limitations and Standards and Compliance Requirements~~

~~a. The GHG BACT emission limits for the HGU-3 reformer furnace are as follows and summarized in Table 2:~~

~~i. GHG emissions shall not exceed 0.052 lb CO_2e per standard cubic feet (scf) hydrogen (H_2) production on a twelve (12) month rolling average.~~

~~ii. GHG emissions shall not exceed 189,800 tons CO_2e in each 12-month rolling period.~~

~~**Table 2 – GHG BACT Emission Limits**~~

~~**Emission Unit**~~	~~**Pollutant**~~	~~**BACT Emission Limit**~~	
		~~**Lb/Scf H_2**~~	~~**Ton Per Year**~~
~~HGU-3 Reformer Furnace~~	~~GHG (CO_2e)~~	~~0.052~~	~~189,800~~

b. The HGU-3 reformer furnace shall be operated using good combustion practices at all times, including startup, shutdown, and malfunction. [K.A.R. 28-19-302(a)]

c. The owner or operator shall follow manufacturer guidelines on maintenance schedules for the HGU-3 reformer furnace. [K.A.R. 28-19-302(a)]

d. The owner or operator shall combust only refinery fuel gas[5], natural gas, and PSA off-gas in the HGU-3 reformer furnace. [K.A.R. 28-19-302(a)]

e. The owner or operator shall install fuel flow meters for measuring the flow rate of each fuel combusted in the HGU-3 reformer furnace. [K.A.R. 28-19-302(a)]

f. The Hydrogen Generation Unit (HGU-3) shall have good design such that venting of GHG (CO_2) emissions from the HGU-3 deaerator atmospheric vent is minimized. Compliance is established by the BACT analysis and emission calculations submitted with the permit application.

g. The GHG emissions from process fugitive equipment shall be controlled by development and implementation of an effective Leak Detection and Repair (LDAR) program. The owner or operator shall conduct the LDAR program in accordance with the regulations identified in **Section VI. Permit Conditions** as follows: *40 CFR Part 60 Subpart GGGa* as described in Subsection C., *40 CFR Part 61 Subpart V* as described in Subsection D., and *40 CFR Part 63 Subpart CC* as described in Subsection F. [K.A.R. 28-19-302(a)]

2. Monitoring, Recordkeeping, and Reporting Requirements

a. The owner or operator shall determine emissions of GHG CO_2e from the HGU-3 reformer furnace monthly using the applicable calculation methodology and procedures identified in 40 CFR Part 98, Mandatory Greenhouse Gas Reporting, and the Global Warming Potentials (GWP) specified in 40 CFR Part 98 Subpart A, Table A-1 as published on October 30, 2009. [K.A.R. 28-19-302(a)]

b. The owner or operator shall maintain records of the HGU-3 reformer furnace fuel sampling and analysis for determining applicable parameters such as carbon content, molecular weight, and high heat value. The fuel sampling and analysis shall be performed according to the procedures specified in 40 CFR 98.34, as applicable. [K.A.R. 28-19-302(a)]

c. The owner or operator shall maintain monthly records of the amount of each fuel combusted in the HGU-3 reformer furnace. [K.A.R. 28-19-302(a)]

[5] Refinery fuel gas, defined in *40 CFR Part 63 Subpart CC, National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries (40 CFR 63.641)*, means a gaseous mixture of methane, light hydrocarbons, hydrogen, and other miscellaneous species (nitrogen, carbon dioxide, hydrogen sulfide, etc.) that is produced in the refining of crude oil and/or petrochemical processes and that is separated for use as a fuel in boilers and process heaters throughout the refinery.

~~d. The owner or operator shall maintain monthly records of the hydrogen production for determining compliance with the 12-month rolling average GHG CO_2e BACT emission limit as specified in **Section VI.** I.1.a.i.~~

~~e. The owner or operator shall maintain records of monthly and annual emissions of GHG CO_2e. Records shall be updated monthly, no later than the last day of the month following the month to which the records relate, and shall specify each 12-month rolling and 12-month rolling average period for determining compliance with the GHG CO_2e BACT emission limits as specified in **Section VI.** I.1.a.i and ii.~~

~~f. For process fugitive equipment GHG emissions controlled by a LDAR program, the owner or operator shall maintain records and submit reports, for BACT compliance, in accordance with the regulations identified in **Section VI. Permit Conditions** as follows: *40 CFR Part 60 Subpart GGGa* as described in Subsection C., *40 CFR Part 61 Subpart V* as described in Subsection D., and *40 CFR Part 63 Subpart CC* as described in Subsection F. [K.A.R. 28-19-302(a)]~~

~~g. Records shall be maintained on site for a period of five (5) years from the date of the record. [K.A.R. 28-19-302(a)]~~

~~h. The owner or operator shall submit semi-annual reports detailing compliance with the annual BACT emission limits. After initial startup, reports shall be submitted by the end of the month following the end of each calendar half. The reports shall include the following information: Company name/address, identification of affected unit, reporting period dates, and summary of the records maintained for compliance determination.~~

VII. Notification

A. Notify the Air Program Field Staff at the South Central District Office in Wichita at (316) 337-6042 within 30 days of completion of the proposed project so that an evaluation can be conducted.

B. For affected facilities subject to 40 CFR Part 60, New Source Performance Standards (NSPS), the owner or operator may use the enclosed NSPS Notification form to submit to the KDHE written notification of the information specified in 40 CFR 60.7(a) and 60.8, as applicable.

VIII. General Provisions

A. This document shall become void if the construction or modification has not commenced within 18 months of the effective date, or if the construction or modification is interrupted for a period of 18 months or longer.

B. A construction permit or approval must be issued by KDHE prior to commencing any construction or modification of equipment or processes which results in potential-to-emit increases equal to or greater than the thresholds specified at K.A.R. 28-19-300.

C. Upon presentation of credentials and other documents as may be required by law, representatives

of the KDHE (including authorized contractors of the KDHE) shall be allowed to:

1. enter upon the premises where a regulated facility or activity is located or conducted or where records must be kept under conditions of this document;

2. have access to and copy, at reasonable times, any records that must be kept under conditions of this document;

3. inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this document; and

4. sample or monitor, at reasonable times, for the purposes of assuring compliance with this document or as otherwise authorized by the Secretary of the KDHE, any substances or parameters at any location.

D. The emission unit or stationary source which is the subject of this document shall be operated in compliance with all applicable requirements of the Kansas Air Quality Act and the federal Clean Air Act.

E. This document is subject to periodic review and amendment as deemed necessary to fulfill the intent and purpose of the Kansas Air Quality Statutes and Regulations.

F. This document does not relieve the permittee of the obligation to obtain any approvals, permits, licenses, or documents of sanction which may be required by other federal, state, or local agencies.

Permit Writer

_____ _____

Rasha S. Allen
Environmental Scientist
Air Permitting Section

Date Signed

RSA:saw
c: David Butler, SCDO
C-13042 (Revises C-10961)